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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,698	12/08/2003	Jason D. Hanzlik	10395US01	3984
7590		11/01/2007		
Imation Corp. PO Box 64898 St. Paul, MN 55164-0898				
			EXAMINER	
			HAUGLAND, SCOTT J	
			ART UNIT	PAPER NUMBER
			3654	
			MAIL DATE	DELIVERY MODE
			11/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/730,698	Applicant(s) HANZLIK ET AL.	
	Examiner Scott Haugland	Art Unit 3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-11,14-18 and 23-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-11,14-18 and 23-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 6, 10, 14, 15, 17, 23, and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al (U.S. Pat. Appl. Pub. No. 2002/0158161).

Morita et al discloses a tape reel assembly for a data storage tape cartridge comprising: a hub 21 defining a tape winding surface, a flange 22, 23 extending in a radial fashion from an end of the hub, and teeth (of gear 24) integrally formed by the hub.

Morita et al does not disclose that the teeth are formed from a polymer including a lubricating additive.

Morita et al teaches forming elements 4, 6 and integral gear teeth (teeth of gear 42, teeth 63) from a polymer including a lubricating additive (e.g., polytetrafluoroethylene, silicone; par. 119, p. 5) to reduce wear and the resulting powder generated thereby.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the teeth of gear 24 of a polymer including

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polytetrafluoroethylene, silicone or other lubricating additive as taught by Morita et al to reduce wear of the teeth and hub.

Claims 2, 7-9, 11, 16, 18, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al (U.S. Pat. Appl. Pub. No. 2002/0158161) as applied to claims 1, 6, 10, 15, and 17 above, and further in view of Boutni (U.S. Pat. No. 4,749,738).

Morita et al is described above.

Morita et al does not disclose a polymer including up to 25%, 2-10%, or 5% by weight of lubricating additive. Morita et al does not disclose polycarbonate that is 20% glass-filled and containing approximately 5% by weight of polytetrafluoroethylene.

Boutni teaches forming machine elements including gears of a compound comprising polycarbonate, 20% glass fiber, and 5% polytetrafluoroethylene (see example 9, col. 10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the hub 21 and integral gear 24 teeth of Morita et al of a polymer having 5% polytetrafluoroethylene lubricant as taught by Boutni to provide the teeth and hub with good strength and wear resistance.

Response to Arguments

Applicants' arguments filed 8/15/07 have been fully considered but they are not persuasive.

Applicants argue that Morita teaches away from providing reel gear 24 with a lubricating additive since, if one were to provide reel gear 24 with a lubricating additive, the contact portions of both the reel gear 24 and driving gear 13 would slip which would be highly undesirable. However, this is not seen to be the case since power is transmitted from the driving gear 13 to the reel gear 24 by means of teeth. Friction between the gear teeth is not required to transmit power. In fact, it is common to lubricate gears having teeth to reduce friction and thereby reduce wear and heat generation. High friction between engaging faces of the teeth is not desirable. The teeth should slide against each other as smoothly as possible to avoid wear, etc. Based on Applicants' reasoning, it would be undesirable to use lubricating additive in brake element 4 (contrary to the disclosure of Morita et al) since this would result in slippage between teeth 42 and 27 and prevent the brake from performing its intended purpose of preventing relative movement between the teeth. It is noted in paragraph 119 of Morita et al that use of resin including lubricating additive suppresses the formation of powder due to wear. Such powder can interfere with the recording and reproducing operation of the apparatus. Reduction of wear between the driving gear 13 and the reel gear 24 would be desirable for the same reason. Morita et al teaches means to accomplish this reduction in wear. Nothing in Morita et al teaches away from using lubricating additive in gear 24. Gear 24 is disclosed as being formed of resin. The possibility of including a lubricating additive is not excluded and the reduction of wear between gears 13 and 24 would be beneficial for the reasons taught by Morita et al.

In response to Applicants' argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). As noted above, the modification of Morita et al is based on the teachings of Morita et al and knowledge of the principles of operation of the device in Morita et al that would have been within the level of skill of an ordinary artisan.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

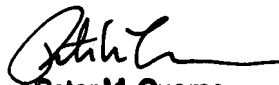
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Haugland whose telephone number is (571) 272-6945. The examiner can normally be reached on Mon. - Fri., 10:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Cuomo can be reached on (571) 272-6856. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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sjh
10/22/07


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